

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 37

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PHILIP C. COMP

Appeal No. 1999-2254
Application No. 08/323,060

HEARD: October 25, 2001

Before WILLIAM F. SMITH, SCHEINER and ADAMS, Administrative Patent Judges.

ADAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-9, 11-16 and 19-21, which are all the claims pending in the application.

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Claims 1 and 14 are illustrative of the subject matter on appeal and are reproduced below:

1. A method for inhibiting microvascular bleeding at a site in a patient exhibiting microvascular bleeding comprising administering to the patient a compound in a pharmaceutically acceptable carrier in an effective amount to prevent anticoagulation by greater than 90% of activated protein C in human plasma, wherein the compound is an inhibitor of an anticoagulant selected from the group consisting of protein C, antithrombin III, heparin cofactor II, thrombomodulin and tissue factor pathway inhibitor.
14. A composition for inhibition of microvascular bleeding comprising as a first component an inhibitor of a natural anticoagulant selected from the group consisting of protein C, thrombomodulin, antithrombin III, heparin cofactor II and tissue factor pathway inhibitor in a pharmaceutically acceptable carrier for systemic administration to a patient and as a second component a coagulant in a pharmaceutically acceptable carrier for topical administration to a patient.

The references relied upon by the examiner are:

Nishimaki et al. (Nishimaki)	5,130,244	July 14, 1992
Esmon et al. (Esmon)	5,202,253	April 13, 1993

Furie et al. (Furie), "The Molecular Basis of Blood Coagulation," Cell, Vol. 53, pp. 505-518 (1988)

GROUND OF REJECTION

Claims 14-16 stand rejected under 35 U.S.C. § 112, first and second paragraphs, as the specification fails to describe or enable the claimed composition, and the term "composition" is indefinite as used in the context of the claims.

Claims 1-9, 11-16 and 19-21 stand rejected under 35 U.S.C. § 112, first paragraph, as being based on a disclosure that is insufficient to support or enable the scope of the claimed invention.

Claims 4 and 19 stand rejected under 35 U.S.C. § 112, first paragraph, as the specification fails to adequately describe the claimed invention.

Claim 21 stands rejected under 35 U.S.C. § 112, first paragraph, as being based on a disclosure that is insufficient to enable the claimed invention, due to the requirement for the deposit of a biological material.

Claims 1-3, 7, 11-13, 20 and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Esmon.

Claims 4 and 19¹ stand rejected under 35 U.S.C. § 103 as being unpatentable over Esmon in view of Nishimaki.

Claims 5, 6, 8, 9, 14-16 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Esmon in view of Nishimaki in view of Furie.

We affirm the rejection of claims 14-16 under 35 U.S.C. § 112, first and second paragraphs. We do not reach the merits of claims 14-16 in any other rejection. We reverse all other rejections as they apply to claims 1-9, 11-13 and 19-21.

DISCUSSION

In reaching our decision in this appeal, we considered appellant's specification and claims, in addition to the respective positions articulated by the appellant and the examiner. We make reference to the examiner's Answer² for

¹ We note that the examiner's reference to claim 18 in this rejection appears to be a typographical error since claim 18 is no longer pending in this application. Claim 19, however, depends from claim 4 and both claims are drawn to topical administration, the subject matter of this rejection. Therefore, the examiner's reference to claim 18 has been corrected to read claim 19 herein.

² Paper No. 31, mailed October 10, 1996.

the examiner's reasoning in support of the rejections. We further reference appellant's Brief³ for the appellant's arguments in favor of patentability.

35 U.S.C. § 112, FIRST AND SECOND PARAGRAPH REJECTION:

Appellant states (Brief, page 4) that the claims "do not stand or fall together." However, we find no separate argument with respect to claims 14-16 as required by 37 CFR § 1.192(c)(5) (1996) (claims stand or fall together "unless a statement is included that the rejected claims do not stand or fall together and, in the appropriate part or parts of the argument under paragraph (c)(6) of this section, appellant presents reasons as to why appellant considers the rejected claims to be separately patentable" [emphasis added]). Therefore, the claims stand or fall together, and we limit our discussion to representative independent claim 14. Claims 15 and 16 will stand or fall together with claim 14. In re Young, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991).

The composition of claim 14, is comprised of two components "as a first component an inhibitor of a natural anticoagulant ... in a pharmaceutically acceptable carrier for systemic administration to a patient and as a second component a coagulant in a pharmaceutically acceptable carrier for topical administration to a patient."

According to the examiner (Answer, page 9):

A composition is by definition a physical mixture of ingredients. Thus, appellants [sic] use of the term composition in claim 14 is repugnant to its art recognized use because claim 14 recites that one component is suitable for systemic administration, while the second component is

³ Paper No. 30, received August 7, 1996.

suitable for topical administration and therefore the ingredients are not physically mixed. If the language used is interpreted as including two agents mixed together, than [sic] there is no disclosure in the specification of such a composition.

In response, appellant argues (Brief, page 19) that:

Claims 14-16 defines [sic] a composition having two components: [1] an inhibitor of a specific natural anticoagulant in a pharmaceutically acceptable carrier for systemic administration and [2] a coagulant [in a pharmaceutically acceptable carrier] for topical administration. The claims are intended to encompass two components whether in a single container or in two containers.

According to appellant (Brief, page 19) “[t]here is a rule of common sense in reading claims – the standard is whether they are indefinite to one of ordinary skill in the art – not whether they can be twisted and misinterpreted to cover any conceivable embodiment that might not work.” Appellant is correct in that there is a legal standard for indefiniteness. As set forth in Amgen Inc. v. Chugai Pharmaceutical Co., Ltd., 927 F.2d 1200, 1217, 18 USPQ2d 1016, 1030 (Fed. Cir. 1991):

The statute requires that “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” A decision as to whether a claim is invalid under this provision requires a determination whether those skilled in the art would understand what is claimed. See Shatterproof Glass Corp. v. Libbey-Owens Ford Co., 758 F.2d 613, 624, 225 USPQ 634, 641 (Fed. Cir. 1985) (Claims must “reasonably apprise those skilled in the art” as to their scope and be “as precise as the subject matter permits.”).

In addition to a legal standard for indefiniteness, there is also an accepted construction for the term “composition”. As set forth in Diamond v. Chakrabarty,

447 U.S. 303, 308, 206 USPQ 193, 197 (quoting Shell Development Co. v. Watson, 149 F. Supp. 279, 280, 113 USPQ 265, 266 (D.D.C. 1957), aff'd per curiam, 252 F.2d 861, 116 USPQ 428 (D.C. Cir. 1958), "a composition of matter has been construed consistent with its common usage to include 'all compositions of two or more substances and ... all composite articles, whether they be the results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders, or solids'" [emphasis added]. This construction of the term "composition", however, is incompatible with appellant's argument (Brief, page 19) that "the claims are intended to encompass two components whether in a single container or in two containers."

Appellant's statement (id.) that the two components could be "in two containers," is inconsistent with the claim that requires a composition comprising a first and second component, which according to Chakrabarty "results [from] ... chemical union, or ... mechanical mixture...." Appellant's statement (id.) that the two components could be in a single container appears to be inconsistent with the requirement that each of the two claimed components be in a pharmaceutically acceptable carrier for "systemic administration" and a pharmaceutically acceptable carrier for "topical administration".

As set forth in In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989):

[D]uring patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of

claim scope be removed, as much as possible, during the administrative process.

Furthermore, as the examiner explains (Answer, page 9) “[i]f the language used is interpreted as including two agents mixed together, ... there is no disclosure in the specification of such a composition.” We note that appellant failed to address the “first paragraph” component of this rejection, made under 35 U.S.C. § 112, first and second paragraphs. Compare In re Morris, 127 F.3d 1048, 1056, 44 USPQ2d 1023, 1029 (Fed. Cir. 1997):

The appellants urge us to consult the specification and some of the cited prior art, including Brown, and interpret the disputed language more narrowly in view thereof. When read in light of this material, according to applicants, the “true” meaning of the phrase emerges. We decline to attempt to harmonize the applicants’ interpretation with the application and prior art. Such an approach puts the burden in the wrong place. It is the applicants’ burden to precisely define the invention, not the PTO’s.

While the claims in Morris were not rejected on the ground of indefiniteness, the court explained that 35 U.S.C. § 112, second paragraph puts the burden of precise claim drafting squarely on the applicant. Id. The problem in this case, as in Morris⁴, is that appellant failed to make the intended meaning explicitly clear. Therefore, we agree with the examiner that claim 14 is indefinite and lacks an enabling disclosure in the specification. Accordingly, we affirm the rejection of claim 14 under 35 U.S.C. § 112, first and second paragraphs. As discussed supra claims 15 and 16 fall together with claim 14.

⁴ In re Morris, 127 F.3d at 1056, 44 USPQ2d at 1029.

Since claim 14 and its dependent claims 15 and 16 are indefinite, we will not address the merits of any other rejection as it applies to these claims. As set forth in In re Steele, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962) analyzing claims based on “speculation as to meaning of the terms employed and assumptions as to the scope of such claims” is legal error.

35 U.S.C. § 112, FIRST PARAGRAPH REJECTIONS:

The rejection of claims 1-9, 11-13 and 19-21⁵:

The examiner sets forth (Answer, pages 4-6) three grounds upon which he finds that the specification does not enable the use of the claimed invention throughout its full scope. First, the examiner finds (Answer, page 5) that Esmon teaches “that the HPC-4 antibody has unique properties which distinguish it from other antiprotein C antibodies, including CA^{2+} [sic] dependency.” Therefore the examiner concludes (id.) that:

It is not apparent or predictable that any antibody per se against protein C would be able to mediate the microvascular bleeding inhibition effect achieved when this antibody with unique properties is used. In addition it is equally unclear whether nonantibody agents that inhibit protein C function would be able to mediate the effect seen using the HPC-4 antibody.

Second, the examiner finds (id.) that Esmon “teach that the HPC-4 antibody can prevent the activation of protein C, but does not bind to protein C once it is activated....” Therefore, the examiner concludes (id.) that “[i]t is therefore unpredictable as to whether the HPC-4 antibody can be used to prevent microvascular bleeding after the bleeding has already occurred, because

⁵ We will not reach the merits of this rejection as it relates to claims 14-16.

activated protein C is now present and the HPC-4 antibody does not bind to protein C once it is activated.”

Third, the examiner finds (Answer, page 6) that “the use of inhibitors of an anticoagulant other than the HPC-4 anti-protein C antibody, the specification discloses that, ‘the possibility of pathologic thrombosis must certainly be considered whenever a systemic thrombogenic drug is utilized....’” Therefore the examiner concludes (id.):

While the specification provides evidence that this does not occur in the pig model when HPC-4 anti-protein C antibody is used, there is no disclosure in the specification as to whether other inhibitors of an anticoagulant encompassed by the claims would cause pathologic thrombosis when administered in vivo ... thus precluding the use of said agents in vivo in humans.

In each instance, the examiner failed to perform the fact-finding needed in order to reach a proper conclusion that the specification does not enable the claimed invention. The enablement requirement of 35 U.S.C. § 112, first paragraph, requires that the patent specification enable “those skilled in the art to make and use the full scope of the claimed invention without ‘undue experimentation.’” Genentech, Inc. v. Novo Nordisk. A/S, 108 F.3d at 1365, 42 USPQ2d at 1004 (quoting In re Wright, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)).

Whether making or using the invention would have required undue experimentation, and thus whether the disclosure is enabling, is a legal conclusion based on several underlying factual inquiries. See In re Wands, 858 F.2d 731, 735, 736-37, 8 USPQ2d 1400, 1402, 1404 (Fed. Cir. 1988). As set

forth in Wands, the factors to be considered in determining whether a claimed invention is enabled throughout its scope without undue experimentation include the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples, the nature of the invention, the state of the prior art, the relative skill of those in the art, the predictability or unpredictability of the art, and the breadth of the claims.

We find no Wands analysis in this record. Instead, we find only the examiner's unsupported conclusions as to why the specification does not enable the claimed invention. In the absence of a fact-based statement of a rejection based upon the relevant legal standards, the examiner has not sustained his initial burden⁶ of establishing a prima facie case of non-enablement.

Furthermore, to the extent that the examiner is concerned with the scope of the examples set forth in appellant's specification, we note that examples are not required to satisfy section 112, first paragraph. In re Strahilevitz, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982).

Therefore, in our opinion, the examiner failed to meet his burden of establishing a prima facie case of non-enablement. Accordingly, we reverse the rejection of claims 1-9, 11-13 and 19-21 under 35 U.S.C. § 112, first paragraph. As set forth, supra, we do not reach the merits of this rejection as it applies to claims 14-16.

⁶ It is well settled that the examiner bears the initial burden of providing reasons why a supporting disclosure does not enable a claim. In re Marzocchi, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971).

The rejection of claims 4 and 19:

According to the examiner (Answer, page 6) “[t]he specification has provided insufficient guidance with respect to the topical administration of an inhibitor of a natural anticoagulant of the instant invention.” The examiner reasons (Answer, pages 6-7) that the specification provides no guidance with regard to: the dosage or timing of the topical administration; whether topical administration will result in the absorption of sufficient quantities of the agent; or whether the topical administration to a bleeding site would have any effect on microvascular bleeding. Therefore, the examiner concludes (Answer, page 7) “[i]t appears that undue experimentation would be required of one skilled in the art to practice the instant invention using the teachings of the specification alone.

Here again, we find only the examiner’s unsupported conclusions as to why the specification does not enable the claimed invention. In the absence of a fact-based statement of a rejection based upon the relevant legal standards, as discussed supra, the examiner has not sustained his initial burden of establishing a prima facie case of non-enablement.

Therefore, in our opinion, the examiner failed to meet his burden of establishing a prima facie case of non-enablement. Accordingly, we reverse the rejection of claims 4 and 19 under 35 U.S.C. § 112, first paragraph.

The rejection of claim 21:

The examiner finds (Answer, page 7) “that the hybridoma which secretes the antibody known as HPC-4 is required to practice the instant invention....” In addition, the examiner finds (Answer, page 8) that “[t]he specification does not

provide a repeatable method for obtaining the hybridoma which secretes the antibody known as HPC-4.” The examiner also finds (id.) that “the claim reads on a specific deposited hybridoma that would have specific properties of the particular clone or subclone that was deposited at the time of deposit.”

Therefore, the examiner concludes (id.) that a “[d]eposit of the hybridoma would satisfy the enablement requirements of 35 U.S.C.

[§] 112, [first paragraph].”

In response, appellant argues (Brief, page 15) with reference to In re Argoudelis, 434 F.2d 1390, 1394, 168 USPQ 99, (CCPA 1970) that “[t]here is always the possibility that sometime after the issuance of a patent the disclosure which was initially enabling may become ‘unenabling’” According to appellant (id.) the claimed “antibody is the subject of an issued U.S. Patent [5,202,253, issued April 13, 1993], which was referenced in the application as originally filed at page 12, lines 11-19, as amended on August 2, 1993 after issuance of the patent.”

However, the examiner maintains the rejection arguing (Answer, page 23) even “if the deposit was made under conditions satisfying all the deposit requirements in the [5,202,253] US patent in which said deposit would [sic] made, said cell line would not be publicly available for the period of enforceability of any US patent issued from the US patent application currently under consideration.” On this record, the examiner failed to demonstrate that the deposited material referenced at page 12 of appellant’s specification was not “publicly available.” Instead, his concern with regard to this deposited material is

that it may not be publicly available for the period of enforceability of any patent issued from the instant application. To this end, we note as set forth in the Manual of Patent Examining Practice § 2404.01 (8th ed.):

Although there is a public interest in the availability of a deposited biological material during and after the period of enforceability of the patent, there should not be any undue concern about continued access to the public. Unless there is a reasonable basis to believe that the biological material will cease to be available during the enforceable life of the patent, current availability would satisfy the requirement. The incentives provided by the patent system should not be constrained by the mere possibility that a disclosure that was once enabling would become non-enabling over a period of time through no fault of the patentee. In re Metcalfe, 410 F.2d 1378, 161 USPQ 789 (CCPA 1969).

If an applicant has adequately established that a biological material is known and readily available, the Office will accept that showing. In those instances, however, the applicant takes the risk that the material may cease to be known and readily available. Such a defect cannot be cured by reissue after the grant of a patent.

Accordingly, we reverse the rejection of claim 21 under 35 U.S.C. § 112, first paragraph, as being based on a disclosure that is insufficient to enable the claimed invention, due to the requirement for the deposit of a biological material.

35 U.S.C. § 103 REJECTIONS:

Claims 1-3, 7, 11-13, 20 and 21:

According to the examiner (Answer, page 11) Esmon discloses the HPC-4 antiprotein C antibody is an inhibitor of the anticoagulant protein C and can be used to induce microvascular clotting in a tumor bed. In addition, the examiner finds (id.) that Esmon discloses "the HPC-4 antibody in a pharmaceutically acceptable carrier, at a dosage to block greater than 90% of endogenous protein C ... therefore blocking greater than 90% of activated protein C in human

plasma.” Therefore, the examiner concludes (Answer, page 12) that “[a] routineer would have realized that since the antiprotein C antibody can be used to promote clotting, including clotting of the microvascular bed of a tumor, then the instant antibody could be used to promote microvascular clotting in any application that was desired.”

In response, appellant argues (Brief, page 20), “[t]here is no disclosure [in Esmon] of using the antibody to inhibit microvascular bleeding.” In response, the examiner repeatedly states (Answer, pages 25, 26 and 27) Esmon discloses, “antiprotein C antibody can be used to promote clotting (inhibit bleeding) (see paragraph four, column 12).” We find on review of paragraph four, column 12, that Esmon discloses “[a]ddition of an antibody to Protein C ... can be used to promote clotting in individuals where it is desirable to do so.” This however, begs the question, where is it desirable to do so? In this regard, we note as set forth in In re Wesslau, 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965) that it “is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.” Therefore, we consider Esmon in its entirety. According to Esmon (column 3, lines 14-20) “the antibody ... can be effective in promoting clotting in patients having high levels of Factor VIII inhibitors, hemophilia, platelet deficiencies (thrombocytopenia), and other clotting disorders where it is desirable to increase clotting.” As appellant points out

(Brief, page 20) Esmon also discloses (Column 13, lines 15-24) the beneficial use of the antibody,

in situations where normal homeostasis is impaired.

This method can also be applied in the treatment of other clotting factor deficiency states, including thrombocytopenia, for example, as induced by heparin or radiation therapy, liver disease and hemorrhagic stroke, both acutely and to minimize rebleeding after the acute incident.

HPC-4 can also be used to induce microvascular clotting in a solid tumor bed.

However, as appellant points out (Brief, page 20) Esmon does not disclose the use of the antibody to inhibit microvascular bleeding as required by appellant's claimed invention.

While the examiner focused on Esmon's disclosure of inducing "microvascular clotting in a solid tumor bed," the examiner failed to make any finding of fact that would provide a nexus between inducing microvascular clotting in a solid tumor bed and inhibiting microvascular bleeding. We remind the examiner that conclusions of obviousness must be based upon facts, not generality. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967); In re Freed, 425 F.2d 785, 788, 165 USPQ 570, 571 (CCPA 1970).

Therefore, to the extent that the examiner would find microvascular bleeding to have been prima facie obvious from the disclosure of Esmon, the examiner has not provided the facts to support this conclusion. On these circumstances, we are constrained to reach the conclusion that the examiner has failed to provide the evidence necessary to support a prima facie case of obviousness. Where the examiner fails to establish a prima facie case, the

rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Accordingly, we reverse the rejection of claims 1-3, 7, 11-13, 20 and 21 under 35 U.S.C. § 103 as being unpatentable over Esmon.

Claims 4 and 19:

According to the examiner (Answer, page 13) Esmon “makes obvious the instant invention, except for topical administration of the inhibitor of an anticoagulant.” To make up for this deficiency the examiner relies (id.) on Nishimaki to “teach that it was known in the art that an agent which exerted a blood coagulating effect could be applied topically for use as a hemostatic agent in surgery.”

Nishimaki, however, fails to make up for Esmon’s failure to disclose the inhibition of microvascular bleeding as required by the appellant’s claimed invention. See supra. Accordingly, we reverse the rejection of claims 4 and 19 under 35 U.S.C. § 103 as being unpatentable over Esmon in view of Nishimaki.

Claims 5, 6, 8, 9 and 19⁷:

The examiner finds (Answer, page 14) that the combination of Esmon in view of Nishimaki fail to teach “the use of a topical coagulant in addition to the use of the inhibitor of an anticoagulant.” The examiner relies on Furie to teach (Answer, page 15) “that clot formation ... is mediated by thrombin via the effect

⁷ We will not reach the merits of this rejection as it relates to claims 14-16.

of thrombin on fibrinogen ... [and] that thrombin can also lead to the activation of protein C, which is an anticoagulant which would prevent blood clotting...."

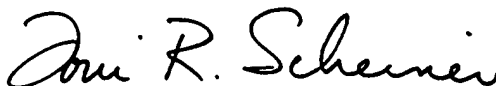
While the examiner suggests (Answer, page 15) that "[i]t would have been obvious to a routineer that thrombin could have [been] used as a coagulant to treat any known form of bleeding, including microvascular bleeding," as discussed supra, the examiner fails to provide a factual basis to support this suggestion. Therefore, in our opinion, Furie fails to make up for the deficiency in combination of Esmon and Nishimaki. See supra. Accordingly, we reverse the rejection of claims 5, 6, 8, 9 and 19 under 35 U.S.C. § 103 as being unpatentable over Esmon in view of Nishimaki and further in view of Furie.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART



William F. Smith
Administrative Patent Judge



Toni R. Scheiner
Administrative Patent Judge



Donald E. Adams
Administrative Patent Judge

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Appeal No. 1999-2294

Application No. 08/323,060

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